CHAPTER THREE
MONEY, COINS AND
THE ECONOMY

Cécile Morrisson

In early medieval Europe some large territories had hardly any money at all, while others relied on barter, ingots or extraneous coins traded as metal and often cut for the purpose. In the former provinces of the Western empire the Roman tradition gradually evolved into several diverging patterns: monometallic silver coinage in Francia, gold and sometimes silver surviving in the Visigothic and Lombard kingdoms in the south. Byzantium was alone in maintaining, albeit with the necessary adaptations, the main characteristics of the late Roman coinage, which was to remain the basic form of money through the nine centuries considered in this volume. Its pivot and cornerstone was the gold solidus/nomisma. Created in 312 as the outcome of the reforms of Diocletian and Constantine which checked the third-century crisis of the Roman silver denarius, the new system remained relatively stable over some six centuries. It was a multi-metallic and multi-denominational scheme of varying complexity, which adapted well to extremely varied exchanges. Coined money derived from an elaborate financial and fiscal organization that made a powerful contribution to the economic integration of a huge territory, as it had done in the Roman period. We will first outline its evolution, then the conditions of its production (mints and imperial finances) before considering its role in the economy and the variations in monetization.

COINS AND COINAGE
(SIXTH TO FIFTEENTH CENTURIES)

The coinage of the seventh century retained the three traditional gold denominations that had existed since the fifth century: the solidus struck at ½ of a Roman pound, the semissis and the tremissis, which all remained very pure (c. 98 per cent). The silver coinage which had been limited in the sixth century to small issues of ceremonial pieces used for distributions was revived under Herakleios with the creation of the hexagram in 616 whose name was derived from its weight of six grammata or scripula (scruples), but which declined swiftly at the end of Constantine IV’S reign, and became in its turn a “ceremonial” coinage that was struck with solidus dies.

The situation of Byzantine bronze coinage in the mid-seventh century cannot be
understood without a short glance at a major monetary event of the previous period. Anastasius’ reform of the bronze coinage (in 498) put an end to a long period of inflation in the smallest denomination, the nummus, whose relative value to the gold solidus had fallen from $\frac{1}{7,700}$ in 445 to $\frac{1}{16,800}$ in 498. Anastasius created a series of multiples of this minute coin (of 0.6–0.5 g, or even 0.2 g), the follis of 40 nummi, the half-follis of 20 nummi, the dekanoummion and the pentanoummion, all bearing their mark of value and the name of the mint, a system which was to last until the eighth century. This innovative reform struck contemporaries enough for it to be related in several sources: Malalas, a Syriac chronicle and Marcellinus Comes.5

The stabilization of the small currency however did not last forever. The weight of the follis which had remained constant at 18 g from 512 to 538 and from 542 to 565, following the episode of the large folles dated by regnal years XII–XV, declined progressively until it reached 11–12 g under Maurice and in the first years of Herakleios’ reign. This inflation went on continuously during the seventh century and the decline in the purchasing power of the follis is illustrated by the progressive disappearance of its fractions in excavation finds: the pentanoummion, like the dekanoummion, becomes increasingly rare as of the 580s. Finally fractions ceased being struck: the last known examples of pentanoummia are under Constantine IV, with one single example under Constantine V; the dekanoummion disappeared under Constantine V; and the half follis disappeared for good under Theophilos.

The monetary system of the Isaurians and the Macedonians emerged from this process as much simpler, though still pluri-metallic, where each metal, gold, silver and copper was embodied in one denomination only.

Constantinopolitan gold suffered, starting in the 680s, a reduction in its gold content and weight (from 98 per cent and 4.41 g, which prevailed in the period 491–668, to 96 per cent and 4.36 g on average). Only half of the weight reduction was due to the presence in the alloy of metals less valuable and less dense than gold. In terms of the fine gold content, the savings effected were small (2.7 per cent, being 0.12 g saved on 4.32 g), but not negligible. Further slight variations are observed in the eighth and ninth centuries but have not been studied in detail.6 They did not affect the overall quality of the metropolitan gold which remained always higher than 90 per cent. Silver was now represented by the emblematic iconoclastic coin, the miliaréson created in 721.

The coin’s broad, thin fabric, triple border of dots and use of a figured type with an inscription that covers the whole of one face of the coin may have been copied

<table>
<thead>
<tr>
<th>Table 3.1 The Byzantine monetary system in the eighth to tenth centuries</th>
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<td><strong>Gold</strong></td>
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<tr>
<td>Solidus Nomisma</td>
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<td>(~ 4.50 g 98% Au)</td>
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* Semisses and tremisses are very rare after 741. The last ones were struck under Basil I (867–86).
from the contemporary Arab dirham as well as inspired by the inscriptions on earlier seals. This iconography is typical of the Iconoclasts’ exclusive insistence on the cross with the choice for the inscription around the cross of the invocation of Constantine: *Iesus Christus Nika*, “Jesus Christ Conquers.” The miliaresion was probably intended to compete with the dirham on the political level, by confronting it with a profession of faith by the Christian empire, under the protection of God and the victorious Cross. Although originally ceremonial in nature, since it was only issued in the name of the *megas basilēs* in association with his son and heir, the silver coinage soon exceeded this function and, as will be seen, played an active part in tax payments and private transactions as attested in several sources or the archaeological record. It had become the intermediary coinage par excellence, replacing the fractions of the nomisma.

The bronze follis knew two short-lived reinforcements of its weight: one after Herakleios’ victory in 629, the other under Constantine IV (d. 685), who restored the earlier Justinianic weight of $\frac{1}{16}$ of a pound (18 g). However, by the end of the seventh century the follis fell to its previous lower weight, due to the need to strike a growing number of coins at a time when copper was in short supply. This is demonstrated by various measures, such as melting down statues, seizing metal from the roofs of churches (as did Constans II in Rome) and occasionally resorting to the use of lead. The haste with which the pieces were struck bears witness to rapid inflation; one finds overstrikes, countermarks and blanks scissored by cutting the large pieces of former times into four. From the mid-eighth century onward the follis was the only and smallest bronze denomination; its mark of value in nummi (M for 40) was now meaningless and was replaced under Theophilus by an inscription in several lines in the reverse field similar to that on the silver coinage. There are only signs of possible variations in the relative values of coins: improvements in the weight of the miliaresion under Theophilus or Basil I and increased value some time in the tenth century, but the fundamental ratio of 1 nomisma = 12 miliaresia = 288 folles, expressed in the *Book of the Prefect* and the *Palaia Logarike*, occurs also at the end of the eleventh century in the *Glossai nomikai* and other scholia to the *Basilics* and is implied in certain accounts in the *Book of Ceremonies*.

This simple trimetallic structure underwent various transformations in the late tenth and eleventh centuries. Under the emperor John I Tzimiskes (969–76) a bust of Christ was substituted on the bronze coinage for the imperial figure, and the inscription “Jesus Christ, king of those who rule” for the imperial name and title, an innovation which is also noted in the chronicle of Skylitzes. Thus was initiated the abundant series of so-called anonymous folles, which continued until 1092. In the 1030s, fractions of $\frac{1}{2}$ and $\frac{1}{3}$ of the miliaresion were introduced presumably to provide more variety and flexibility for increasing monetary exchanges. More important was the debasement which affected the gold and silver coinages at different dates. Gold experienced a decline following three phases. In the first, from Constantine VII (914–59) to Michael IV (1034–41), a “creeping” alteration increased the proportion of silver in the gold coinage by an annual average of 0.04 per cent. It was during this first phase that Nikephoros II Phokas (d. 969) introduced a lightweight nomisma called the *tetarteron*, which was reduced by one-twelfth ("a small quarter," *tetarteron* in relation to the full-weight standard nomisma, the *histamenon*). According to Kedrenos and Zonaras, he issued a law ordering that it be preferred, in transactions,
to the older and heavier coin. But the manipulation failed since the market adjusted the prices to the inferior value of the coin. His successors continued to issue the lightweight nomisma, even perfectly distinguished in type and fabric from 1005 onward, probably still paying in them partially or totally the state’s expenses.

No source alludes to the creeping debasement, which was moderate and less painful than those which followed. In the second phase, from Constantine IX (1042–55) to around 1069 the amount of silver in the alloy now rose at 0.4 per cent per year, probably entailing an increase in money supply in the order of 1 per cent (or an increase by one-third in monetary units over these thirty years). The purity of the nomisma had fallen from c. 90 per cent to 70 per cent (21\(\frac{2}{3}\) to 17 carats).

In the final and dramatic phase from 1071 to 1092, the gold fineness fell rapidly from 35.8 per cent to 10.6 per cent under Alexios I, whose “gold” coinage was in appearance no more than a silver coinage. From this point chronicles refer to the dire straits of imperial finances and the debasement of the nomisma, which was now obvious from the whitish colour of the pieces. Instead of using native unrefined gold, moneyers were resorting to alloying the nomismata with silver mainly derived from existing miliareia. The process allowed for a much smaller increase in the number of coins struck, and forced repeated alterations: miliareia having been thrown into the melting pot, in turn new silver coins had to be alloyed with copper, and the subsequent reminting of these debased miliareia into nomismata resulted in the last histamenata with as little as 18 per cent gold.

Once Alexios I had succeeded in regaining control in the Balkans and parts of Asia Minor, notably after his victory at Lebounion in 1091, he staged a major reordering of the coinage, beginning with the coronation of his son John in 1092. As M. Hendy demonstrated in a fundamental study, Alexios managed to restore a gold coinage of high fineness, the hyperpyron (“fire refined”), flanked by a third-hyperpyron, the

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<tr>
<th>Phase</th>
<th>Reign</th>
<th>Dates</th>
<th>% Gold</th>
<th>% Silver</th>
<th>% Copper</th>
<th>Annual rate and process of debasement</th>
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<tr>
<td>1st phase</td>
<td>Justinian II to Leo VI</td>
<td>695–912</td>
<td>97.3</td>
<td>1.99</td>
<td>0.7</td>
<td>0.04% Adding non-purified native gold</td>
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<td></td>
<td>Constantine VII</td>
<td>914–59</td>
<td>94.4</td>
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<td>Michael IV</td>
<td>1034–41</td>
<td>90</td>
<td>7</td>
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<td>2nd phase</td>
<td>Constantine IX</td>
<td>1041–55</td>
<td>87</td>
<td>10.9</td>
<td>2.1</td>
<td>0.4% Adding non-purified native gold</td>
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<td>Romanos IV</td>
<td>1068–71</td>
<td>70</td>
<td>24.8</td>
<td>5.2</td>
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<tr>
<td>3rd phase</td>
<td>Michael VII</td>
<td>1071–8</td>
<td>58.1</td>
<td>37.1</td>
<td>4.8</td>
<td>1.6% Adding silver and copper</td>
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<td></td>
<td>Nikephoros III</td>
<td>1078–81</td>
<td>35.8</td>
<td>56.6</td>
<td>7.6</td>
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<tr>
<td></td>
<td>Alexios I (pre-reform)</td>
<td>1081–92</td>
<td>10.6</td>
<td>72.5</td>
<td>16.9</td>
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Data: Morrisson *et al.* 1985

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Table 3.2 The principal stages of gold debasement (914–1092): average values
nomisma aspron trachy or trikephalon ("three-headed coin," also a pun on its value) of white gold, a silver-washed copper ("billon aspron trachy" called stamenon in common usage) and two small copper coins, the tetarteron and its half, probably called noumion. The hyperpyron was not "hyper-pure" but corresponded to the 20½ carats average of debased coins in 1028–56, while its ⅔, with 30 per cent gold, 60 per cent silver and 10 per cent copper, stemmed from the reminting of the debased "gold" coins of the period 1070–91. Metallurgical constraints, the disappearance of silver in the last phase of the debasement and the paucity of new metal explain the curious standards chosen by the mint authorities. The Komnenian system was just as articulated as the early Byzantine system and clearly adapted to a variegated scale of exchanges.

The hyperpyron remained relatively stable during the twelfth century, sliding only in the 1180s from the initial 87 per cent to 82 per cent in 1204. The electrum (gold-silver) coin was however debased and its value fell to ⅔, then to ⅔ hyperpyron, while the stamenon decreased from ⅔ in 1136 to ⅔ in 1190 and ⅔ in 1199. Following 1204 the Byzantine monetary tradition was maintained to various extents by the successor states. Only the empire of Nicaea could issue the whole series of denominations, hyperpyra, trikephala (now pure silver coins worth ¾ of the gold one), stamena (now pure copper coins) and a few tetartera.

After 1261 the Palaiologoi were the only rulers who pursued the trimetallic system in the Komnenian tradition, but they had to adapt it to the penetration and competition from western coinages by creating western-inspired denominations, the basilikon derived from the Venetian silver doukaton (ducat, grosso), which replaced the trikephalon, and the politikon copied from the billon denier tournois. The hyperpyron was reduced from around 17 carats (70 per cent) during the Nicaean period to c. 11 carats (45 per cent) in around 1310 and onward. We will see below that this was not only due to the dire straits of imperial finances but also to the differing silver-gold ratios in the East and in the West. Thus in 1353 the Byzantine gold coin created by Constantine terminated its thousand-year history. But the hyperpyron had an afterlife as a money of account whose value could be paid by two big silver coins, called stavrati in the sources. These coins, equivalent to twice the weight of fine metal in the last hyperpyra at a 1:9 gold:silver ratio, were accompanied by two fractions of one-half and one-quarter, and two copper small coins (tournesion and follaro), and were struck through the last years of the empire as texts and the recently discovered hoard of Constantine XI demonstrate.

Till the end, the Byzantine monetary system proved its wide range and adaptability to the financial and economic context, to which we turn now.

MONEY AND IMPERIAL FINANCES

The main features of monetary production established by Diocletian and Constantine were somewhat altered at the beginning of the seventh century. Minting which depended on the comes sacrarum largitionum was now under the vestiarion, and the distribution of mints, following the Slav invasion and the Persian war, underwent a major reorganization. Gone were the diocesan mints for bronze (Thessalonika for Macedonia, Nicomedia for Pontus, Cyzicus for Asia, Antioch for Orients, Alexandria for Egypt: the first three closed in 630, the last two in 610 and 646). Constantinople
only was supplying the eastern themes, which constituted from now on the core of the empire, with gold, silver and copper coins. This centralized minting was supplemented temporarily by Thessalonika where copper striking resumed in the ninth century, and marginally by Cherson where specific cast-bronze coins were issued from 842 to 989 for local use in this Byzantine outpost.

In the western Byzantine possessions, on the contrary, regionalization was the rule. Down to the Arab conquest (695), when it was transferred to Cagliari and continued to issue irregularly through 720, the Carthage mint issued a trimetallic coinage with an abundant gold production dated by regnal or indiction years. These solidi were characterized by a curious globular and thick form which may have been intended as a way of saving the energy required for striking, thus accelerating fabrication. In Italy, where Byzantine possessions were isolated from each other by the Lombards, minting was much fragmented. Gold coins, which are rather difficult to identify since wherever they were produced they always bore the uniform inscription CONOB (“refined gold of the Constantinopolitan standard”), were struck in Rome and Ravenna, Naples and Syracuse.

The provincial mints were autonomous and loosely supported by the capital, which explains why from the 690s they diverged more and more from metropolitan standards until they disappeared: Rome in 776, Ravenna in 751, Naples in 842, Syracuse in 879 and its replacement Reggio in 912. They were forced into debasing gold, beginning in 695 at Syracuse where the fineness fell to c. 80 per cent. This stabilized under Leo III, following his confiscation of the papal revenues of the island, until a second and final devaluation between c. 820 and 886, which turned the nomisma into a coin that was half copper. A comparable debasement affected the gold of the other Italian mints, as well as the little Roman silver coins with the emperor’s effigy and the monogram of the popes, which fell from 95 per cent to 30 per cent fineness until they were replaced by denarii in Carolingian style in 796. The loss of most Italian possessions, except for Calabria and part of Apulia, resulted in a near complete centralization of imperial mints from the ninth century onward. When Apulia was reconquered in the tenth century, coins were provided from Constantinople and no provincial mint was installed, presumably for fear of providing too much cash to possible rebellious leaders. It is clear that the central mint was able to provide for the needs of a large territory but no information is available on the means used to this end other than scattered mentions in sources of sums from tax collecting or intended for military pay being robbed or seized by enemies or rebels.

In the Komnenian period, after an initial production of reformed coins in several provincial mints, Thessalonika, Philippopolis in Macedonia, Isaccea in Paristrion (“beside the [lower] Danube”), minting seems to have been centralized again in Constantinople, this time in two separate mints (a moneta imperialis responsible for precious metal coins and a moneta publica for small change), while Thessalonika limited itself to issuing tetartera and noumia destined for the Greek territory. Due to the increase in particularism and provincial rebellions during the twelfth century, there appeared mints of a more or less ephemeral nature such as in Trebizond where the Gabrades struck folles at the time of Alexios I, or in Philadelphia where, according to Niketas Choniates, Theodore Mankaphas (1188–90) “struck a silver nomisma and had his name engraved on it.” But no silver coins of this period, only roughly produced trachea bearing the effigy of Theodore, have been found in Asia.
Minor, Bulgaria and northern Greece. The most important of these mints was Cyprus, where Isaac Komnenos (1184–91), drawing on the wealth of the island, struck a varied and abundant coinage in all metals except gold.25

In the Palaiologan period the Constantinopolitan mint(s) changed from a directly managed imperial workshop into one which could accept bullion or coins brought by private individuals and was probably farmed out from the mid-fourteenth century onwards.26 That the revenues of the mint were considered important by the state is shown by the claim made in 1258 by Michael VIII to a share in the kommerkion and khrysepsêteion (gold-smelting and minting installation) of the Constantinople mint. The extreme variety in coin types of copper coinage, characteristic of post-1204 issues, points also to possible regular changes (on an annual or pluri-annual, trimestrial, basis) yielding seignorage profit on forced exchange, like the western renovationes. The numerous privy marks on the hyperpyra have also led to similar speculation that cannot yet be proven. Many of them also designated the moneyers in charge.27 Thessalonika, which had resumed minting under the Komnenoi-Doukai, remained active till 1370 and under Manuel II (1391–1425) some poor torneselli were struck in Monemvasia or Mistra.28

At this point of our survey it is important to stress that even with this later episode of “mint-farming,” there were never in Byzantium as in the West any concessions of minting rights to local authorities (counts, bishops, religious establishments). Supervision of the mint and its possible profits always belonged to the emperor, who could control the output of new issues, an important element of money supply. Although it would be anachronistic to consider that a monetary policy in the modern meaning of the term could be envisaged, it is clear that the emperor could adapt the quantities struck, their metal content and nominal value, to both his resources in bullion and his financial needs, as clearly stated in the famous passage in Psellos’ Chronographia referring to how Michael VII understood every detail of finance (synteleia) exactly: its organisation and management, how much the treasury (ta dèmosia) paid to each person and how much each paid back to the treasury; the production of coins and the equilibrium of a balance, excesses and deficiencies of weight, how the touchstone (khrysitès) worked; and how many measures of pure metal (kathara bylè) each of the pieces of stamped gold contained.29

Bringing together in the same development the budget and the production of coins, including their fineness, highlights the conscious use of debasement as the most common means of multiplying monetary units when metal supply was short. In fact, the three phases of debasement of the tenth and eleventh centuries outlined above can be contextualized in the financial needs of the expanding empire at that time: the first one coincides with the military offensives and reconquests conducted by John I, Nikephoros II and Basil II, the second more with the protracted war of Constantine IX against the Pechenegs than with his lavish expenditure on buildings,30 the third and last one with the dire straits and financial needs caused by the advance of the Seljuks in Asia Minor as already analysed by the contemporary chronicler Nikephoros Bryennios:

He did not grant the highest honours to the most notable . . . the military . . . but
to all those who asked for them. He did the same with what the Romans [i.e. the Byzantines] called offikia so that as a consequence, expenditure exceeded revenue by several times. And so, for this reason . . . money was lacking, the nomisma was debased and the gifts of money attached . . . to offices were brought to an end. For the influx of money which derived from Asia and which went to supply the treasury ceased because the whole of Asia fell into the possession of the Turks, and since that deriving from Europe also decreased drastically, because of its ill-use by earlier emperors, the imperial treasury found itself in the greatest want of money.31

This is obviously a “crisis debasement,” as was also that of the Palaiologan hyperpyron “because of need” likewise lucidly analysed by George Pachymeres:

The nomisma was debased because of need. At first, under John [III] Doukas the refined gold of nomismata amounted to two-thirds of their weight [i.e. sixteen carats], and this situation continued under his successor. Then, under Michael [VIII], after the recovery of the City, because of the expenses then necessary, not least with regard to the Italians, he [Michael] . . . reduced the measure of gold by a carat, so that the total of twenty-four units [carats] fell to a ratio of fifteen to nine [of alloy]. Later, when he was succeeded [by Andronikos II], it amounted to fourteen [of gold] compared with ten [of alloy], and now [c. 1308] the purity is said to be mixed by half [i.e. twelve of gold compared with twelve of alloy].32

On the contrary, the first two phases of the eleventh-century debasement can be termed “expansion debasements.” Whatever their immediate cause, they did not have a negative impact on the economy. The increase which their process (adding unrefined gold) permitted in the number of gold coins struck was matched more or less in the long run, from the 950s to the 1060s, by a corresponding increase in the number of monetized transactions due to the territorial, demographic and economic expansion of the time. The evidence, though slight, which points to price stability in the same period excludes that the deficit of the treasury could be the only reason for these earlier debasements. A deficit-driven debasement would have mechanically led to a rise of prices as happened in the late eleventh century and had earlier happened in the third century.33 On the contrary the earlier two debasements provided an expanding economy with increased monetary exchanges with the necessary instruments for payments whose shortage would have otherwise stalled growth.

MONEY IN THE ECONOMY

This brings us to the behaviour and role of money in the Byzantine economy. The durable and flexible monetary system, which was responsive not only to fiscal but also to commercial needs, together with the enforcement of the elaborate Roman law and practice on property rights, credit, just price and profits, honest measures and transactions,34 provided, at least when peace, political stability and a relative measure of social justice could be assured, the favourable and necessary conditions for some degree of economic development. Until the twelfth century, there is no doubt that Byzantium benefited from a higher monetization of the agrarian economy, a
greater urbanization and consequently a greater division of labour than in the West. The role of trade and the standard of living were both obviously superior to those in the West. Byzantium had two comparative advantages: its gold coin, the “dollar of the Middle Ages,” and its unified monetary system which reduced the transaction costs in a larger territory than the smaller states of the West. On the basis of the data and analyses collected in the Economic History of Byzantium, a model of what the economy may have looked like in the mid-twelfth century was proposed integrating all the relevant factors of fiscality and monetization. This plausible picture, which in my opinion is also valid for the sixth century, gives the following interdependent parameters:

(a) Agriculture represents 75 per cent of domestic production.
(b) Monetization of agriculture is 35 per cent.
(c) Monetization of the non-agricultural sector is 80 per cent.
(d) The tax burden on total agricultural product is 23 per cent.
(e) The tax burden on monetized non-agricultural product is 20 per cent.

This picture of a monetized economy must not however be idealized: even in the “flourishing” sixth or twelfth century there were always areas which, mainly because of their inland location, were relatively demonetized or, at best, knew of a slow, seasonal and viscose circulation of change as in the case of thirteenth-century Epiros, or in the other several examples cited by Hendy to bolster his “suggestion of a monetary economy of a very limited kind only,” inferior to that of Anglo-Saxon England. We must be wary of subjective generalizations and contrasting examples of monetary exchange drawn from saints’ lives of the eighth to eleventh centuries with those of transactions concluded partly or wholly in kind in the thirteenth and fourteenth centuries. As in all other pre-industrial countries, the level of monetization in the capital and provincial cities on the main sea or land routes was very different from that which obtained in the more remote urban sites and countryside. This explains the recurring problems of payment and exchange encountered by the armies of the Second and the Third Crusades, when, according to Odo of Deuil, French troops changed a staminum for five deniers in the Balkans, five or six in Asia Minor and for only two at Constantinople, thanks to the agreement that had been concluded with Manuel I, and certainly also to the greater availability of cash in the capital.

Levels of monetization varied according to a hierarchy reflecting that of incomes and social status, and numerous examples can be produced from texts, hoards and excavation evidence. Contemporary texts like the twelfth-century satire of Ptochoprodromos contrast the higoumenos counting his hyperpyra and the poor monk counting only his beans, unable to buy himself some caviar, if only for a tetarteron, or to give a “follis” (i.e. a stamenon) in alms. The Pantokrator Typikon, with its detailed list of salaries (and related cash and food allowances), supplies and coin distributions, provides complete evidence for all known Komnenian denominations from the hyperpyron, the electrum trikephala, theotokia or hagiogeorgata, the aspra trachea worth \(\frac{1}{4}\) of the hyperpyron used for allowances of lesser personnel, down to the tetartera and noumia distributed to the fifty patients for their daily refreshments or to the poor on the commemorations of the imperial founders. Similarly Badoer mentions the silver stavrati and duchatelli, the latter paid to porters carrying or...
transporting goods to and from the dockyards and Badoer’s merchant house and a small copper denomination called tornexe which he reckons at \( \frac{1}{3} \) carat, that is \( \frac{1}{192} \) of the hyperpyron and \( \frac{1}{384} \) of the stavrato.\(^{45}\)

Several texts however show how one had to pass from one metal to another, whether downward from gold or silver to procure small change for alms or everyday expenses, or upward to pay one’s taxes according to the principles of the Palai Logarike, which from Leo III onward demanded that the kanon be paid in the superior nomisma once it amounted to more than eight miliareia (i.e. one nomisma for two-thirds nomisma, two nomismata for one and two-thirds nomismata, etc.), the taxpayer receiving the change (antistrophe) in small change (miliareia or folles).\(^{46}\)

This implied the ubiquitous presence of moneychangers in squares, fora and streets of every city and temporary markets. Their activity was tightly controlled by the state and their possible wrongdoings (cheating on weight or coins) severely punished.\(^{47}\)

While gold was the instrument of big payments and among all movable assets, and was the metal hoarded preferentially, silver has left fewer deposits. However, its occasional presence in archaeological stray finds documents its current use. Copper coins, though less hoarded, nevertheless feature in numerous deposits of the late sixth and early seventh centuries related to the penetration of the Slavs in the Balkans. Naturally, they are the most frequently represented in stray finds accumulated on archaeological sites, and their annual frequency, which shows a general dramatic decrease in the period 668–829 or 886 on most sites excavated in the Balkans and Asia Minor, provides a rough index of the de-urbanisation and demonetization of the time. In a few cities or regions, mostly but not all situated near the sea, coins are still found in some numbers: Constantinople in the first instance, Bithynia and Sicily – an exceptional centre of economic resilience in the eighth century – and also Calabria, Albania and Amorion.\(^{48}\) The “take off” and secular growth of the Byzantine population and economy from the eighth century onward which accelerated in the tenth century are illustrated not only in the graphs of coin finds from Athens, Corinth and other sites, including rural ones,\(^{49}\) but also in those showing the marked increase in the number of gold coins issued, as derived from die-study analysis.\(^{50}\) The monetary evidence is one important element in the overall picture derived from archaeology and archival documents which depict the increase in settlements and population, in agricultural investments and surplus productions, in the manufacture of glazed ceramics, silk textiles of all qualities, glass, precious or more common metalwork, all objects of an active trade.

Unsurprisingly, after the sixth century, the eleventh and twelfth centuries are those of the greatest expansion of the Byzantine money in the empire and beyond. Besantius, bisantius, besant, which from the tenth century onward designated in the West the Byzantine coin, had become a common word for any gold coin of the time. The crisis debasement of the period from 1059 to 1092 was forgotten and the Komnenian hyperpyron enjoyed an even wider circulation in Mediterranean trade as evidenced, for example, in Venetian documents of the period.\(^{51}\) With the Fatimid dinar in the East and the Almoravid (morabitino) in the West, it was one of the “dollars of the Middle Ages,” an international currency with high intrinsic value and purchasing power,\(^{52}\) with a stable quality supported by a powerful economy.\(^{53}\)

After 1204 and 1261 the integration of Byzantium into an international market dominated by the Italian merchants led to a complete reversal of the previous
situation and division of labour: instead of exporting commodities with a high added value to the West, Byzantium and the eastern Mediterranean at large were now exporting raw materials and agricultural products and importing manufactured products like woollen cloth. In the monetary field, the most important reversal was the “return to gold” in the West when Genoa and Venice struck their genovino and gold ducat. The latter became the common currency of trade, in place of the hyperpyron and the dinar. That was the outcome of differing gold–silver ratios that brought western silver coins to the East and drove gold to the West, a phenomenon which contributed, together with Byzantium’s financial crisis, to the end of the hyperpyron and Byzantium’s own conversion to silver. The contrast was now also inverted with what had been the rule in the early period: instead of a large unified monetary market with a wide area of penetration, Byzantium’s restricted territory was now open to and sometimes dominated by western or Turkish currencies at the end of a prestigious and influential history.

NOTES

1 Grierson and Blackburn 1986; Spufford 1988.
2 In what follows I have often relied on my more detailed assessment, Morrisson 2002.
3 For a summary of the Roman metrology scale, see Table 3.3.
4 Grierson 1968; Morrisson forthcoming a.
6 See data collected in Morrisson et al. 1985.
7 The special fonts used here for coins inscriptions were first created by the late Professor Nicolas Oikonomides in 1986 and subsequently enriched by Glenn Ruby (†) and the Publications Department of Dumbarton Oaks (Washington, DC). The author is very grateful to DO for graciously releasing these fonts for use in scholarly publications.
8 §3.3, ed. Koder 1991b, 90–1: Οἱ καταλλάκται μὴ διαιρείτωσαν τὸ μιλιαρίσιον τὸ ἀκίβδηλον τὸν βασιλικὸν ἐχον χαρακτήρα καὶ μὴ παρακεκοµµένον, ἀλλὰ ἰσοτίµως ἄνα εἴκοσι καὶ τέσσαρα ὀβολοὺς λαµβανέτωσαν αὐτό. “The money-changers should not distinguish against the unadulterated and not counterfeited miliaresion having the imperial stamp but should accept equally for each one twenty-four obols” (trans. Hendy 1985: 253). Koder understands παρακεκοµµένον as “beschnitten,” an allusion to the clipping practices denounced in other paragraphs of the Book of the Eparch, though with different words (3.1: τέµνειν, 10.4: ψαλίζειν). “Obol” is the usual high-brow term for the follis, or in general for the smaller bronze unit.
References in Grierson 1973.
See Hendy 1985: 235
Morrison et al. 1985 has trace element analyses explaining the processes and references to earlier data.
Hendy 1969.
Hendy 1969.
Hendy 1999.
For the administrative basis of coinage production, see Hendy 1985: 371–447 and Hendy 1989: IV–VIII.
Brandes 2002. In 899 the ἄρχων τῆς χαραγής belonged to the vestiarion while the necessary precious metal was smelted in the χρυσοχειαν that was part of the eidikon where is also found the χρυσοσυνευτής (gold refiner and assayer). See Oikonomides 1972: 315–17.
Delamare et al. 1984.
Morrison et al. 1983; Prigent and Morrison forthcoming.
According to a recent revision of available evidence by Papadopoulou 2007, contra Hendy 1999.
Matschke 1997.
Grierson 1999: 63, 231; Hendy 1999: 112–21. Various estimates of the possible rhythm of these changes have been proposed in several articles by S. Bendall.
According to the recent identification by Baker 2006.
Kaplanis 2003.
Pachymeres 1984: 540; trans. in Laiou and Morrison 2007. The figures for debase given in this text and in Pegolotti compare exactly with the actual values from analyses, see Morrison 2002: fig. 4.
For the details of the argument, relying on Fisher’s equation, see Morrison 1976, a study which was the first to highlight the economic expansion of the eleventh century, later analysed by Harvey 1989, without proper recognition of the monetary findings.
See the various contributions on “Legal Aspects of the Economy” and “Economic Thought and Ideology” in Laiou 2002b: 1059–1120, 1123–44.
For a comparison arguing that the Byzantine empire was the richest part of Europe, and at the upper limits of the European GDP in the twelfth century, see Luiten Van Zanden 2005. See also Milanović 2006.
A term coined by R. S. Lopez 1951 in the after-war time of inflation and fragmentation of weak European currencies.
Laiou 2001b.
As assembled respectively by Oikonomides 1994 and Saradi 1995a.
For the sixth and seventh centuries see Patlagean 1977: 342–409.
Badoer 1956, passim; see Morrison 2001.
Book of the Eparch, 3, s.v. καταλλάκτης, τραπεζίτης; Dagron in Laiou 2002b: 407–12; Morrison forthcoming c.
See Morrison 2002 and Morrison forthcoming b.
49 For graphs of coin finds, see Morrisson 2002: figs 6.1–15 after p. 912.
50 Füeg 2007.
51 Laiou 2001a.
52 A nomisma could buy some ten lambs or six sheep, 3 modioi of land (c. 3,000 m²) or 3 modioi of wheat (38 kg). For other references and lists see Morrisson and Cheynet 2002: 808–70. In Venice, a nomisma was worth 120 denarii in AD 1000, 496 denarii in 1196. Even after the creation of the Venetian grosso of 12 d, at the end of the twelfth century, the West had no coin with a purchasing power comparable to that of the bezant or the dinar.
54 Day 2002, with references; Bertelè 1973.